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CERTIFICATE

This certificate is issued in support of an application for Patent registration in a country outside New Zealand pursuant to the Patents Act 1953 and the Regulations thereunder.

I hereby certify that annexed is a true copy of the Provisional Specification as filed on 7 February 2003 with an application for Letters Patent number 524092 made by Jonathan James Ferguson PHILLIPS.

Dated 2 March 2004.

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Neville Harris

Neville Harris
Commissioner of Patents, Trade Marks and Designs



524092

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Patents Form No. 4

Patents Act 1953

PROVISIONAL SPECIFICATION

ROTATING SIGN

20

I, Jonathan James Ferguson PHILLIPS, a New Zealand citizen of 5A St Clio Street,
Christchurch, New Zealand, do hereby declare this invention to be described in the following
statement:

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The present invention relates to a rotating sign used for advertising purposes.

Rotating signs are well-known, most commonly in the form of footpath signs in which the rotating portion of the sign is carried within a fixed frame mounted on a weighted base.

5 However, the existing designs of rotating sign have two significant drawbacks:- first, if the frame is handled when the sign is rotating, the person's hand can be jammed between the frame and the sign and injured. Second, the speed of rotation of the sign is completely dependent upon wind speed, and in high winds the sign may rotate so rapidly that it is unreadable and/or the sign may be damaged, or cause injury to bystanders.

10 It is therefore an object of the present invention to provide a design for a rotating sign which overcomes the above described drawbacks.

The present invention provides a rotating sign which includes a rotating sign portion
15 mounted upon an axle so as to be rotatable relative thereto; and further including means for limiting the rotational speed of said rotating sign portion relative to said axle.

Preferably, said means for limiting the rotational speed of said rotating sign portion
20 comprises a friction plate rigidly secured to said axle and a brake pad secured to said sign portion; said brake pad being arranged to be pressed into frictional braking engagement with said friction plate with a force dependant upon the speed of rotation of said sign portion.

By way of example only, a preferred embodiment of the present invention is described in detail with reference to the accompanying drawings in which:-

25 Figure 1 shows a partly sectioned side view of a footpath sign in accordance with the present invention, with the speed control in a first position;

Figure 2 shows a view similar to figure 1, but with the speed control in a second position;

Figure 3 shows a side view of the speed control on a larger scale;

30 Figure 4 shows a plan view of the rotating portion of the sign;

Figure 5 shows a plan view of the base; and

Figure 6 shows a side view of the base.

Referring to the drawings, a rotating sign 2 comprises a rotating sign portion 3, a upper sign

portion 4 and a base 5.

Referring in particular to figure 4, the rotating sign portion 3 consists of two opposed rectangular sheets 6,7 secured together along their vertical edges by end plates 8. The sheets 6,7 are bowed outwards from each other over the central portion of the sign. A wing 9,10 of stiff but resilient material is secured along the full length of each vertical edge, with the plane of the wing coincident with the corresponding end plate 8. The wings 9,10 extend in opposite directions i.e. one adjacent the sheet 6 and the other adjacent the sheet 7. The upper surface of the sign is finished with a top plate 11.

10

In use, each sheet 6,7 may carry advertising material which may be printed directly on the sheets 6,7 or carried on removable panels (not shown) mounted on the sheets 6,7.

A reinforcing bar 12 is mounted across the width of the rotating sign portion 3, a short distance above the lower edge 13 of the portion 3. The bar 12 carries a bearing 14 at its midpoint. A vertical axle 15 in the form of a hollow rigid tube is supported adjacent the top plate 11 of the rotating sign portion 3 by a ball bearing 14a, extends down the full height of the rotating sign portion 3 and passes through the bearing 14 to project a short distance below the lower edge 13 of the rotating sign portion 3; the lower end of the axle 15 is fitted into the central aperture 16 of the base 5 and may be locked to the base by any suitable means.

The upper sign portion 4 comprises a rectangular plate 16 mounted on a short post 17. Each side of the plate 16 may carry advertising material. In the position shown in figure 1, the upper sign portion 4 remains stationary when the rotating sign portion 3 rotates, and the portion 4 is supported on top of the portion 3 by sliding the post 17 into the hollow top of the vertical axle 15.

In the position shown in figure 2, the upper sign portion 4 is pushed downwards towards the rotating sign portion 3 until the lower edge 18 of the portion 4 contacts the upper plate 11 of the portion 3 and the crosspiece 17a formed on top of the axle 17 engages the slots 19 formed in the plate 11, locking the upper sign portion 4 to the portion 3 for rotation with that portion.

The reinforcing bar 12 also supports the control 20 for regulating the speed of rotation of the rotating sign portion 3. The control 20 is shown on larger scale in figure 3, and consists of a lever 21 which is pivoted to the reinforcing bar 12 at a pivot 22 and which terminates in an adjuster 23. The adjuster comprises a slotted plate which receives a pin 24 rigidly secured
5 to a brake lever 25; the head of the pin 24 carries a thumb screw 24a. The angle of the lever 21 relative to the brake lever 25 can be adjusted by slacking off the thumbscrew 24a, swinging the lever 21 in the direction of arrow A or arrow B until the lever 21 is at the desired position relative to the brake lever 25, and then tightening the thumb screw 24a to secure the lever 21 in that position.

10

The brake lever 25 is pivoted at one end on the pivot 22 and the other end carries a brake disk 26 which is arranged to bear upon the surface of a friction plate 27 which is rigidly secured to the axle 15.

15 When the rotating sign portion 3 rotates in use, centrifugal force tends to throw the upper end of the lever 21 in a direction of arrow A. Since the lower end of the lever 21 is rigidly secured to the brake lever 25, this movement of the brake to the 21 tends to urge the brake disk 26 in the direction of arrow C, pressing the surface of the disk 26 into frictional contact with the friction plate 27, and thus braking the rotation of the sign portion 3.

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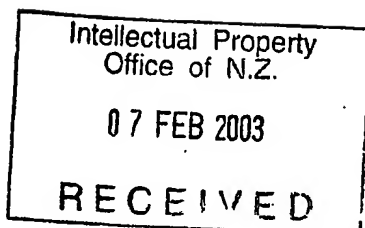
The rotational speed of the rotating sign portion 3 at which the braking effect starts is preselected by the starting position of the lever 21:- the more the upper end of the lever 21 is moved in the direction of arrow B, the higher the speed of rotation of the rotating sign portion before the portion is braked.

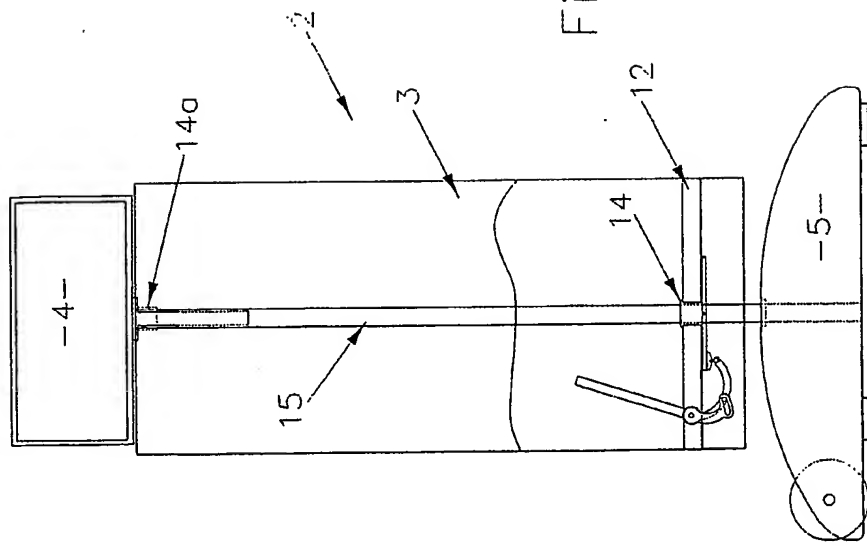
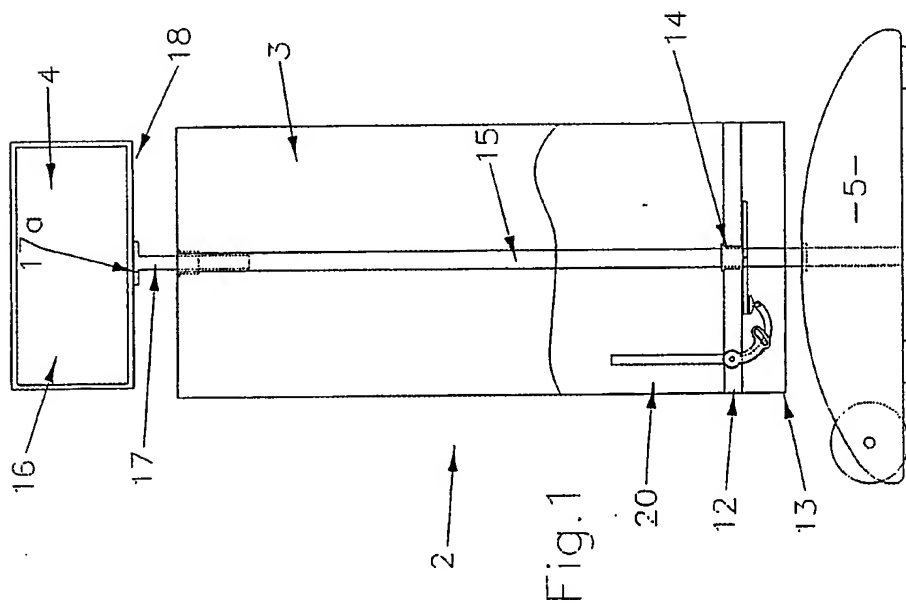
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The base 5 is shown in detail in figures 5 and 6 and comprises a plastics moulding which is circular in plan and which provides moulded-in apertures 25,26 to accommodate a pair of wheels 27 mounted upon an axle 28. The base 5 also may be formed with apertures 29 to receive the ends of a handle which can be used to tilt the whole sign onto the wheels 27, so
30 that the sign can be moved easily.

The base 5 is weighted or can be adapted to be water filled. The base 5 also may accommodate batteries so that the rotating sign portion can be illuminated, and a safety cable or chain so that the sign can be secured in position.

The above described rotating sign also may be secured to a surface, rather than used on the base 5. In this case, the lower end of the axle 15 is received in a socket formed on the surface to which the sign is to be secured.





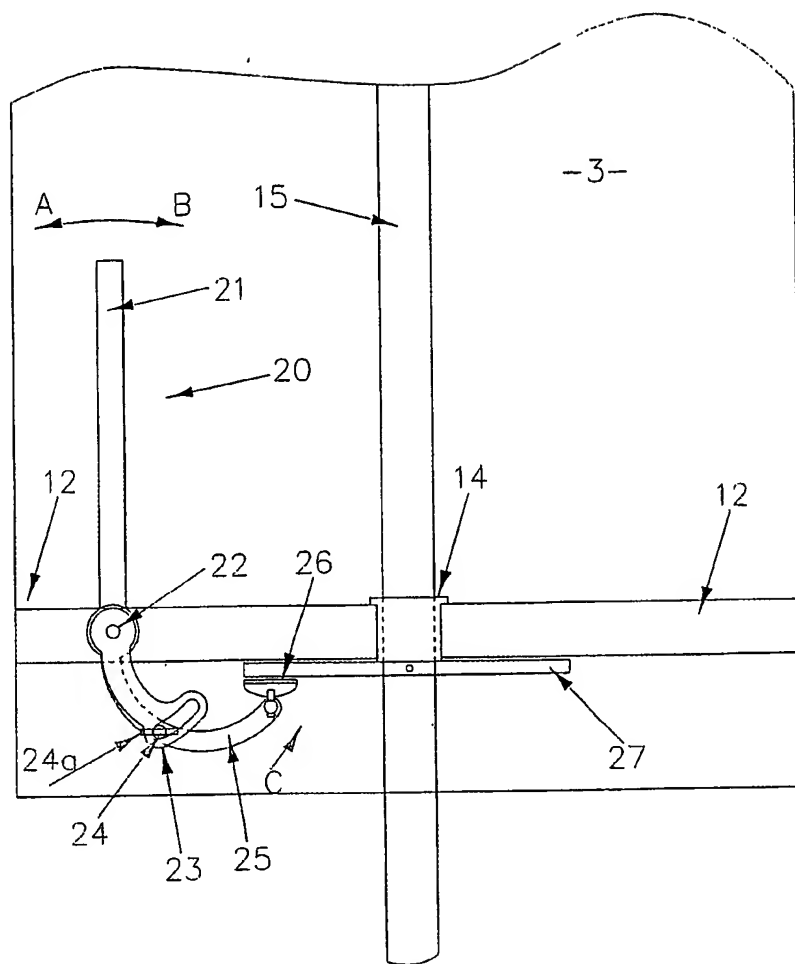


Fig. 3

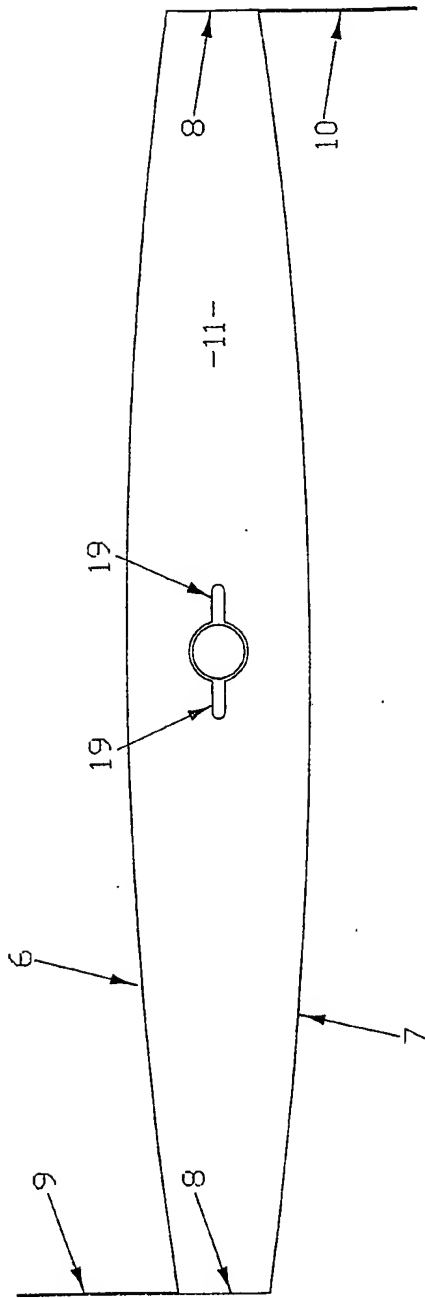


FIG. 4

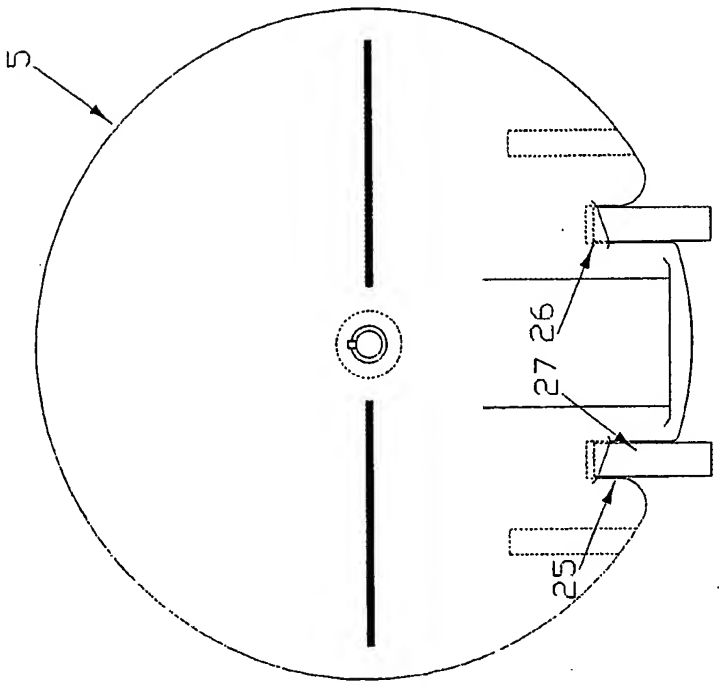


Fig. 5

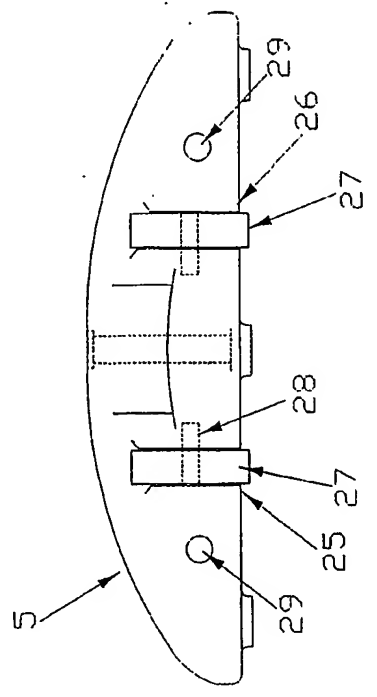


Fig. 6

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